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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of:

Establishment of an Advisory
Committee to Negotiate Proposed
Regulations for the Provision
of Mobile-Satellite Services
Above 1 GHz.

CC Docket No. 92-166

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**REPLY COMMENTS AND OPPOSITION OF
MOTOROLA SATELLITE COMMUNICATIONS, INC.**

Motorola Satellite Communications, Inc. ("Motorola")
hereby submits its reply comments and opposition to the comments
and applications filed in response to the Commission's Public
Notice, DA 92-1085 (released August 7, 1992), in the above-
captioned proceeding.

OVERVIEW

The Commission faces a fundamental problem in assigning
spectrum in the RDSS bands to the "Big LEO" applicants. There is
simply not enough spectrum for six viable voice-MSS systems,
regardless of the modulation scheme employed.

Motorola has proposed three methods, which could be
used singly or in combination to solve or alleviate this problem.

1. More spectrum. The first is to find additional
spectrum that could be assigned to the applicants. In a recently
filed petition for rulemaking, Motorola has identified two bands

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as possible candidates. One of these bands was allocated to MSS at WARC-92. Motorola's technical showing that MSS uplinks could be used in these bands is undisputed. Motorola believes that these bands, when combined with the entire RDSS downlink band and 40% of the RDSS uplink band, could fully meet the first generation needs of non-bidirectional LEO MSS applicants. Even if this additional spectrum does not, it certainly represents spectrum that could substantially alleviate the congestion problem in the RDSS bands. Motorola believes this proposal is a constructive one which merits consideration in the context of the negotiated rulemaking proceeding.

2. Higher threshold financial and other strict application standards. Second, the Commission should raise the financial standards to a level designed to assure that the applicants that are granted permits are reasonably likely to be able to effectuate their plans. The financial standards originally adopted for the RDSS service, while suitable for a new service led by small entrepreneurial companies, is insufficient for MSS satellite systems. The Commission has used this approach in the Domestic Fixed-Satellite Service to weed out speculative applicants, and should do so again here.

The Commission should also apply the relevant technical standards to eliminate several other applicants. In particular, AMSC Subsidiary Corporation ("AMSC") cannot meet the international power limitations on its proposed uplinks in the RDSS band and should be dismissed for this reason alone. The

applications of other Big LEO applicants have equally serious technical problems.

3. If necessary, hold comparative hearings to select a licensee or licensees. Motorola is well aware of the Commission's reluctance to use comparative hearings in the satellite licensing arena. However, in this situation, comparative hearings may be the only way the Commission can give proper weight to the relative merits of the satellite system proposals before it, and award license(s) to the most meritorious proposal(s).

Instead of taking one of these concrete steps, the Commission has proposed a "negotiated rulemaking" in an attempt to reach a consensus among the parties. In contrast to the techniques described above, it is difficult to see how a negotiated rulemaking can solve the basic "too many applicants/too little spectrum" problem. No company is going to agree to dismiss its application, for example. Nor does the negotiated rulemaking proceeding currently envision consideration of alternative spectrum.

In order for the negotiated rulemaking proceeding to have any likelihood of success which justifies the time and expense of all parties involved, private and governmental, Motorola urges the Commission to modify the scope of the proceeding in the manner outlined in its original Comments. This includes (1) shortening the process, (2) expanding the scope of the process to include alternative spectrum proposals, (3) requiring the CDMA proponents to clarify their concept of how

they would share in advance of the proceedings, (4) excluding AMSC, and (5) limiting the number of parties to the proceeding.^{1/}

In the following reply comments, Motorola responds to the views of other commenting parties.

I. THE CONSENSUS VIEW AMONG THE BIG LEO
APPLICANTS IS THAT THE TIME PERIOD FOR
THE NEGOTIATED RULEMAKING SHOULD BE SHORTENED

Most of the parties filing comments support Motorola's view that the target date for submitting recommendations to the Commission should be shortened in order to expedite the process. Two and one-half months should be more than enough time to determine whether any consensus can be reached on the issues identified by the Commission as well as those suggested by Motorola and others.

II. THE ADDITION OF ALTERNATIVE SPECTRUM
OPTIONS TO THE AGENDA IS ESSENTIAL

Motorola strongly urges the Commission to expand the scope of the committee's work to include discussion of alternative spectrum options. Motorola believes this is essential for there to be any reasonable prospect of achieving a

^{1/} The Commission must also reject Ellipsat Corporation's ("Ellipsat") suggestion that the definition of "consensus" in the statute should be changed in order for a majority of the committee's members to control the content of the recommendations being made to the Commission. Such a change would affect the fundamental dynamics of the negotiated rulemaking process and ensure that no useful work would be accomplished by the committee. Similarly, Ellipsat's suggestion that certain presumptions be established in favor of the current RDSS technical rules completely ignores the fact that those rules are now obsolete in light of the nature of the current group of applications and that no dedicated RDSS system was ever able to reach the market in accordance with those rules.

consensus during the negotiated rulemaking process. None of the other MSS applicants believe that there is sufficient spectrum in the RDSS bands to accommodate all of the proposed LEO systems as currently proposed. Indeed, all of the other LEO MSS applicants assert that their systems cannot share the same spectrum with Motorola's FDMA/TDMA IRIDIUM™ system. Therefore, additional MSS spectrum above 1 Ghz must be found in order for all of the LEO MSS applicants to receive a license for their proposed systems.

Constellation's opposition to Motorola's proposal to include additional spectrum solutions to the committee's work plan is misguided. Both of the spectrum proposals already presented to the Commission by Motorola were shown to be technically viable and to allow for the licensing of at least the initial systems proposed by all of the qualified LEO MSS applicants. Furthermore, at least one of the proposed options identified by Motorola included new spectrum in the Metsat and Metaids bands allocated for MSS in Region 2 at WARC-92. None of the parties that commented on Motorola's spectrum proposals raised any serious technical objections to them.

Moreover, Constellation is incorrect to suggest that consideration of these spectrum alternatives by the committee would be unmanageable. As Motorola pointed out in its Comments, as various spectrum alternatives are considered by the committee, significantly affected parties not otherwise participating in the committee's work could be brought into the meetings to participate in discussions focusing on the feasibility of sharing these alternative bands. Only those interests already using the

bands under consideration need to participate in this process. In the case of the two spectrum options proposed by Motorola, only a small number of additional parties would have to be added to the deliberations.

III. THE COMMISSION SHOULD REQUIRE THE MSS
APPLICANTS WHICH HAVE PROPOSED COMPATIBLE
CDMA SYSTEMS TO PRESENT THEIR FREQUENCY SHARING
PLANS IN ADVANCE OF THE FIRST MEETING

The negotiated rulemaking process will be vastly accelerated if the LEO applicants that have alleged that they can share the same spectrum are required to clarify the manner in which this would be accomplished prior to the first formal meeting of the committee. To date, the proponents of CDMA have made generalized statements about how they could all operate their systems in a compatible manner. Without a full description of exactly how this would be accomplished, it is impossible to assess the validity of these claims. Concrete information and analysis describing the approach contemplated by these parties, including capacity definition internal to the systems and a sharing analysis with other systems, is essential in order for there to be any productive discussion at the meetings of sharing between CDMA systems.

It is difficult to understand TRW's objections to Motorola's proposal in light of TRW's comments and actions in this proceeding. On the one hand, TRW recommends that the Commission include service rules on the committee's work plan and even has attached specific rule changes in advance of the formation of the committee. On the other hand, TRW complains that it would be patently unfair to require it to produce an

analysis of how it intends to share with other CDMA systems because spectrum sharing has been identified as an issue to be studied by the committee. Contrary to TRW's assertions, Motorola's request for advance notice of the other LEO MSS applicants' approach to sharing is not intended to undermine the mandate of the committee. Rather, it is intended to determine whether there is any basis for meaningful discussion on the merits of such a sharing approach. If the four other LEO MSS applicants cannot even agree amongst themselves as to a sharing scheme, how can Motorola and other parties to the negotiated rulemaking be expected to react to them?

IV. MOTOROLA AGREES WITH THE OTHER LEO MSS APPLICANTS THAT ALL OF THE NEWLY FILED APPLICATIONS FOR MEMBERSHIP SUBMITTED TO THE COMMISSION MUST BE REJECTED

Motorola also opposes the applications for membership that have been submitted by those entities who were not previously identified by the Commission as significantly affected parties in this negotiated rulemaking process. None of these applicants has presented a sufficient basis for inclusion on an advisory committee looking to reach a consensus. In this regard, Motorola agrees with the Commission and most of the other parties to this proceeding that only existing users in the bands under consideration and pre-cutoff MSS applicants are entitled to formal membership on the committee.^{2/}

^{2/} In accordance with the Public Notice, Motorola did not believe that it was necessary for it to apply formally for membership on the committee because the Commission specifically identified "Motorola Corporation" as a member if it decides to proceed with a negotiated rulemaking. In order to avoid any
(continued...)

Accordingly, the Commission should reject the applications for membership of those entities claiming to represent the interests of the Russian GLONASS system or other Global Navigation Satellite Systems ("GNSS"). Protection of the GLONASS system must be afforded in accordance with international Radio Regulation 731X which was adopted at WARC-92.^{3/} Nor has the Communications Satellite Corporation ("Comsat") adequately demonstrated that it needs to be a participant in the negotiated rulemaking. The only interests that Comsat has identified relate solely to its role as a signatory to INMARSAT, the non-domestic international organization whose Secretariat has proposed a new generation of satellites (INMARSAT-P) to provide land mobile service to hand-held units. This INMARSAT-P plan is in the conceptual stages only. Comsat is neither an applicant nor a current user of the bands under consideration in this proceeding, and its inclusion on the committee would only prevent, rather than promote, a consensus on any technical issues.^{4/}

^{2/} (...continued)
ambiguity in this regard, Motorola hereby confirms that it will actively participate in good faith on an advisory committee if one is formed by the Commission. Moreover, Motorola Satellite Communications, Inc., a wholly-owned subsidiary of Motorola Inc., is the real party in interest in this proceeding since it is the entity which filed the IRIDIUM™ system application.

^{3/} If the Commission were to conclude that a representative of such interests would be beneficial to the committee's deliberations, Motorola suggests that the Federal Aviation Administration be designated as the sole additional member to the committee.

^{4/} Similarly, the Commission must reject the membership applications of the National Communications System and the Wireless Cable Association. Neither of these entities has presented any serious reasons for their inclusion on the
(continued...)

Motorola also agrees with the comments of most of the other LEO MSS applicants that the Commission should not include AMSC or Celsat, Inc. ("Celsat") as members on the advisory committee. Celsat did not timely file an application in accordance with the Commission's June 3, 1991 cutoff date, and its petition for rulemaking with respect to the RDSS bands has already been rejected by the Commission in its Notice of Proposed Rulemaking, FCC 92-358, at ¶ 16 n.15 (released Sept. 4, 1992). The Commission specifically noted that Celsat's request for terrestrial operations in the RDSS bands was inconsistent with the WARC-92 allocation for the United States, and that its alternative spectrum proposals above 2 Ghz would be addressed in another proceeding.

Motorola has previously pointed out that the inclusion of AMSC in the negotiated rulemaking process would only prevent the committee from reaching any consensus. The Commission has recently rejected AMSC's rulemaking petition to allocate the 1616-1626.5 Mhz band and the 1515-1525 Mhz band for geostationary MSS and permanently assign those frequencies to AMSC. Id. at ¶ 16 n.15. Moreover, AMSC's proposed operation in the RDSS uplink band would be in conflict with the Commission's proposed inclusion of international Radio Regulation No. 731X to the domestic allocation tables which would create an absolute limit of -3 dBW/4kHz on EIRP densities in the portion of the RDSS

^{4/} (...continued)
committee. They are not existing users in the bands under consideration and none of the issues identified by the Commission or proposed by Motorola in its Comments would significantly affect their interests.

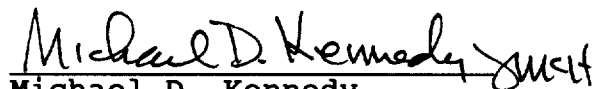
uplink band proposed by AMSC for its operations. Id. at App. A. AMSC's proposed geostationary satellites will not be able to comply with this limit under any circumstances.^{5/}

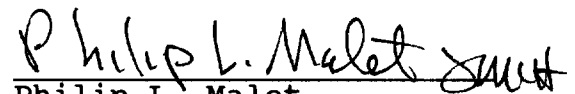
CONCLUSION

For the foregoing reasons, the Commission should incorporate the proposals set forth herein and in Motorola's Comments in this proceeding into its negotiated rulemaking process for MSS/RDSS systems above 1 Ghz.

Respectfully submitted,

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October 2, 1992

^{5/} For these same reasons, the Commission must also reject the membership application of Rockwell International Corporation. In addition, Rockwell is neither an applicant nor an existing user of the spectrum under consideration.

CERTIFICATE OF SERVICE

I, Philip L. Malet, hereby certify that the foregoing Reply Comments and Opposition was served by first-class mail, postage prepaid, this 2nd day of October, 1992 on the following persons:

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